



IFW

## RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/659,980  
Source: o/p  
Date Processed by STIC: 9-22-03

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 4.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry directly to:  
U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7<sup>th</sup> Floor, Examiner Name, Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202  
Or  
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 04/24/2003

## Raw Sequence Listing Error Summary

### ERROR DETECTED

### SUGGESTED CORRECTION

SERIAL NUMBER: 101659,980

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1 ☐ **Wrapped Nucleics  
Wrapped Aminos** The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."
  
- 2 ☐ **Invalid Line Length** The rules require that a line **not exceed** 72 characters in length. This includes white spaces.
  
- 3 ☐ **Misaligned Amino  
Numbering** The numbering under each 5<sup>th</sup> amino acid is misaligned. Do not use tab codes between numbers; use **space characters**, instead.
  
- 4 ☐ **Non-ASCII** The submitted file was **not** saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.
  
- 5 ☐ **Variable Length** Sequence(s) \_\_\_\_\_ contain n's or Xaa's representing more than one residue. **Per Sequence Rules, each n or Xaa can only represent a single residue.** Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.
  
- 6 ☐ **PatentIn 2.0  
"bug"** A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) \_\_\_\_\_. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. **This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.**
  
- 7 ☐ **Skipped Sequences  
(OLD RULES)** Sequence(s) \_\_\_\_\_ missing. If intentional, please insert the following lines for each skipped sequence:  
 (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)  
 (i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)  
 (xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)  
 This sequence is intentionally skipped  
  
 Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.
  
- 8 ☐ **Skipped Sequences  
(NEW RULES)** Sequence(s) \_\_\_\_\_ missing. If intentional, please insert the following lines for each skipped sequence.  
 <210> sequence id number  
 <400> sequence id number  
 000
  
- 9 ☐ **Use of n's or Xaa's  
(NEW RULES)** Use of n's and/or Xaa's have been detected in the Sequence Listing.  
 Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.  
 In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
  
- 10 ☒ **Invalid <213>  
Response** Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is **required** when <213> response is Unknown or is Artificial Sequence
  
- 11 ☐ **Use of <220>** Sequence(s) \_\_\_\_\_ missing the <220> "Feature" and associated numeric identifiers and responses. Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.  
 (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
  
- 12 ☐ **PatentIn 2.0  
"bug"** Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.
  
- 13 ☐ **Misuse of n/Xaa** "n" can only represent a single nucleotide; "Xaa" can only represent a single amino acid



OICE

## RAW SEQUENCE LISTING

DATE: 09/22/2003

PATENT APPLICATION: US/10/659,980

TIME: 14:16:53

Input Set : A:\81289-284781.ST25.txt

Output Set: N:\CRF4\09222003\J659980.raw

3 <110> APPLICANT: Hovanec, Timothy A  
 5 <120> TITLE OF INVENTION: Method for Detecting Ammonia-Oxidizing Bacteria  
 7 <130> FILE REFERENCE: 81289-284781  
 C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/659,980  
 C--> 9 <141> CURRENT FILING DATE: 2003-09-10  
 9 <150> PRIOR APPLICATION NUMBER: US 09/573,684  
 10 <151> PRIOR FILING DATE: 2000-05-19  
 12 <150> PRIOR APPLICATION NUMBER: US 60/386,217  
 13 <151> PRIOR FILING DATE: 2002-09-19  
 15 <150> PRIOR APPLICATION NUMBER: US 60/386,218  
 16 <151> PRIOR FILING DATE: 2002-09-19  
 18 <150> PRIOR APPLICATION NUMBER: US 60/386,219  
 19 <151> PRIOR FILING DATE: 2002-09-19  
 21 <160> NUMBER OF SEQ ID NOS: 23  
 23 <170> SOFTWARE: PatentIn version 3.2  
 25 <210> SEQ ID NO: 1  
 26 <211> LENGTH: 1457  
 27 <212> TYPE: DNA  
 28 <213> ORGANISM: AOB Type A R7clone140 16S rDNA (SEQ ID NO:1)  
 30 <400> SEQUENCE: 1

31	attgaacgct	ggcggcatgc	tttacacatg	caagtcgaac	ggcagcacgg	atgcttgc	60
33	ctggtggcga	gtggcggacg	ggtgagta	gcacgcgaac	gtatccagaa	gaggggggta	120
35	acgcacgaa	agatgtgcta	ataccgcata	tactctaagg	aggaaagcag	gggatcgaaa	180
37	gaccttgccg	ttttggagcg	gccgatgtct	gattagctag	ttggtggggg	aaaggcctac	240
39	caaggcgacg	atcagtagtt	ggtctgagag	gacgaccagc	cacactggga	ctgagacacg	300
41	gcccagactc	ctacgggagg	cagcagtg	gaattttgga	caatgggccc	aagcctgac	360
43	cagcaatgcc	gcgtgagtga	agaaggcctt	cgggttgtaa	agctctttca	gtcgagaaga	420
45	aaagggttac	gtaataatc	gtgactcatg	acggtatcga	cagaagaagc	accggctaac	480
47	tacgtgccag	cagccgcggt	aatacgtagg	gtgcaagcgt	taatcggaat	tactgggcgt	540
49	aaagggtg	caggcggcct	tgtaagtcag	atgtgaaatc	cccgggctta	acctgggaat	600
51	tgcgtttgaa	actacaaggc	tagagtgtgg	cagagggagg	tggaattcca	tgtgtagcag	660
53	tgaaatgcgt	agagatatgg	aagaacatcg	atggcgaagg	cagcctcctg	ggttaacact	720
55	gacgctcatg	cacgaaagcg	tggggagcaa	acaggattag	ataccctggt	agtccacgcc	780
57	ctaaacgatg	tcaactagtt	gttgggcctt	attaggcttg	gtaacgaagc	taacgcgtga	840
59	agttgaccgc	ctggggagta	cggtcgcaag	attaaaactc	aaagggaattg	acggggaccc	900
61	gcacaagcgg	tggattatgt	ggattaattc	gatgcaacgc	gaaaaacctt	acctaccctt	960
63	gacatgtagc	gaattttcta	gagatagatt	agtgtctcgg	gaacgctaac	acaggtgctg	1020
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67	cttgtcatta	attgccatca	tttgggtggg	cactttaatg	agactgccgg	tgacaaaccg	1140
69	gaggaaggtg	gggatgacgt	caagtcctca	tggcccttat	gggtagggct	tcacacgtaa	1200
71	tacaatggcg	cgtacagagg	gttgccaacc	cgcgaggggg	agctaattctc	agaaagcgcg	1260
73	tcgtagtccg	gatcggagtc	tgcaactcga	ctccgtgaag	tcggaatcgc	tagtaatcgc	1320
75	ggatcagcat	gtcgcggtga	atacgttccc	gggtcttgta	cacaccgccc	gtcacaccat	1380

Does Not Comply  
Corrected Diskette Needed

See item 10  
on error summary  
report.

## RAW SEQUENCE LISTING

DATE: 09/22/2003

PATENT APPLICATION: US/10/659,980

TIME: 14:16:53

Input Set : A:\81289-284781.ST25.txt

Output Set: N:\CRF4\09222003\J659980.raw

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77 gggagtgggt ttcaccagaa gcaggtagtc taaccgtaag gagggcgctt gccacggtga 1440
79 gattcatgac tggggtg 1457
82 <210> SEQ ID NO: 2
83 <211> LENGTH: 1457
84 <212> TYPE: DNA
85 <213> ORGANISM: AOB Type A1 R7clone187 16S rDNA (SEQ ID NO:2)
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90 ctggtggcga gtggcgacg ggtgagtaat gcatcggaac gtatccagaa gaggggggta 120
92 acgcacgaa agatgtgcta ataccgcata tactctaagg aggaaagcag gggatcgaaa 180
94 gaccttgccg ttttgagcg gccgatgtct gattagctag ttggtggggg aaaggcctac 240
96 caaggcgacg atcagtagtt ggtctgagag gacgaccagc cacactggga ctgagacacg 300
98 gccagactc ctacgggagg cagcagtggg gaattttgga caatgggcgc aagcctgac 360
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104 tacgtgccag cagccgcggt aatacgtagg gtgcaagcgt taatcggaat tactgggcgt 540
106 aaagggtgcg caggcggcct tgtaagtcag atgtgaaatc cccgggctta acctgggaat 600
108 tgcgtttgaa actacaaagc tagagtgtgg cagagggagg tgggaattcca tgtgtagcag 660
110 tgaaatgcgt agagatatgg aagaacatcg atggcgaagg cagcctcctg ggtaaacact 720
112 gacgtcatg cacgaaagcg tggggagcaa acaggattag ataccctggt agtccacgcc 780
114 ctaaacgatg tcaactagtt gttgggcctt attaggcttg gtaacgaagc taacgcgtga 840
116 agttgaccgc ctggggagta cggtcgcaag attaaaactc aaaggaattg acggggaccc 900
118 gcacaagcgg tggattatgt ggattaatc gatgcaacgc gaaaaacctt acctaccctt 960
120 gacatgtagc gaattttcta gagatagatt agtgcttcgg gaacgctaac acaggtgctg 1020
122 catggtctgc gtcagctcgt gtcgtgagat gttgggttaa gtcccgaac gagcgcaacc 1080
124 cttgtcatta attgccatca tttggttggg cactttaatg agactgccgg tgacaaaccg 1140
126 gaggaaggtg gggatgacgt caagtcctca tggcccttat gggtagggct tcacacgtaa 1200
128 tacaatggcg cgtacagagg gttgccaacc cgcgaggggg agctaactc agaaagcgcg 1260
130 tcgtagtcgg gatcggagtc tgcaactcga ctccgtgaag tcggaatcgc tagtaatcgc 1320
132 ggatcagcat gtcgcggtga atacgttccc gggctctgta cacaccgcc gtcacaccat 1380
134 gggagtgggt ttcaccagaa gcaggtagtc taaccgtaag gagggcgctt gccacggtga 1440
136 gattcatgac tggggtg 1457
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140 <211> LENGTH: 1458
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142 <213> ORGANISM: AOB Type B R3clone5 16S rDNA (SEQ ID NO:3)
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147 ggtggcgagt ggcgaacggg tgagtaatac atcggaacgt atcttcgagg gggggataac 120
149 gcaccgaaag gtgtgcta ataccgataat ctccacggag aaaagcagg gatcgcaaga 180
151 ccttgcgctc ttggagcggc cgatgtctga ttagctagtt ggtgaggtaa tggcttacca 240
153 aggcgacgat cagtagctgg tctgagagga cgaccagcca cactgggact gagacacggc 300
155 ccagactcct acgggaggca gcagtgggga attttgga atgggggaaa ccctgatcca 360
157 gccatgccgc gtgagtgaag aaggccttcg ggttgtaaag ctctttcagc cggaacgaaa 420
159 cggtcacggc taatacccgat gactactgac ggtaccgga gaagaagcac cggctaacta 480
161 cgtgccagca gcccggttaa tacgtagggt gcaagcgta atcggaatta ctgggcgtaa 540
163 agcgtgcgca ggcggttttg taagtcagat gtgaaagccc cgggcttaac ctgggaactg 600
165 cgtttgaaac tacaaggcta gagtgtggca gaggggggtg gaattccacg tgtagcagt 660
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## RAW SEQUENCE LISTING

DATE: 09/22/2003

PATENT APPLICATION: US/10/659,980

TIME: 14:16:53

Input Set : A:\81289-284781.ST25.txt

Output Set: N:\CRF4\09222003\J659980.raw

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169 cgctcaggca cgaagcggtg gggagcaaac aggattagat accctggtag tccacgccct 780
171 aaacgatgtc aactagttgt cgggtcttaa cggacttggg aacgcagcta acgcgtgaag 840
173 ttggccgcct ggggagtacg gtcgcaagat taaaactcaa aggaattgac ggggacccgc 900
175 acaagcggtg gattatgtgg attaatcga tgcaacgcga aaaaccttac ctacccttga 960
177 catgtaccga agcccgcgga gaggtgggtg tgcccgaag ggagcggtaa cacaggtgct 1020
179 gcatggctgt cgtcagctcg tgtcgtgaga tgttgggtta agtcccgcaa cgagcgcaac 1080
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183 ggaggaaggt ggggatgacg tcaagtctc atggccctta tgggtagggc ttcacacgta 1200
185 atacaatggc gcgtacagag ggttgccaac ccgcgagggg gagctaattc cagaaagcgc 1260
187 gtcgtagtcc ggatcggagt ctgcaactcg actccgtgaa gtcggaatcg ctagtaatcg 1320
189 cggatcagca tgtcgcggtg aatacgttcc cgggtcttgt acacaccgcc cgtcacacca 1380
191 tgggagtggg tttcaccaga agcaggtagt ctaaccgcaa ggagggcgct tgccacgggtg 1440
193 agattcatga ctgggggtg                                     1458
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197 <211> LENGTH: 1460
198 <212> TYPE: DNA
199 <213> ORGANISM: AOB Type C R5clone47 16S rDNA (SEQ ID NO:4)
201 <400> SEQUENCE: 4
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204 gccggcgagt ggcgaacggg tgagtaatac atcggaacgt gtccttaagt ggggaataac 120
206 gcatcgaaag atgtgctaata accgcatatc tctgaggaga aaagcagggg atcgcaagac 180
208 cttgcgctaa aggagcggcc gatgtctgat tagctagttg gtggggtaaa ggcttaccaa 240
210 ggcaacgata agtagttggg ctgagaggac gaccaaccac actgggactg agacacggcc 300
212 cagactccta cgggaggcag cagtggggaa ttttgacaa tgggcgaaag cctgatccag 360
214 ccatgccgcg tgagtgaaga aggccttcgg gttgtagagc tcttttagtc agaaagaaaag 420
216 aatcatgatg aataattatg atttatgacg gtactgacag aaaaagcacc ggctaactac 480
218 gtgccagcag ccgcggtaat acgtagggtg cgagcggtta tcggaattac tgggcgtaaa 540
220 ggggtgcgag gcggttttgt aagtcagatg tgaaagcccc gggcttaacc tgggaattgc 600
222 gtttgaaact acaaggctag agtgcagcag aggggagtgg aattccatgt gtagcagtga 660
224 aatgcgtaga gatgtggaag aacaccgatg gcgaaggcag ctccctgggt tgacactgac 720
226 gctcatgcac gaaagcgtgg ggagcaaaca ggattagata ccctggtagt ccacgcccta 780
228 aacgatgtca actggttgtc ggatctaatt aaggatttgg taacgtagct aacgcgtgaa 840
230 gttgaccgcc tggggagtac ggtcgcaaga ttaaaactca aagggaattga cggggacccg 900
232 cacaagcggt ggattatgtg gattaattcg atgcaacgcg aaaaacctta cctacccttg 960
234 acatgcttgg aatctagtgg agacataaga gtgcccgaag gggagccaag acacaggtgc 1020
236 tgcattgctg tcgtcagctc gtgtcgtgag atgttgggtt aagtcccga acgagcgcaa 1080
238 cccttgctac taattgctat cattctaaat gagcacttta gtgagactgc cgtgacaaa 1140
240 ccggaggaag gtgggatga cgtcaagtcc tcatggccct tatgggtagg gcttcacacg 1200
242 taatacaatg gcgtgtacag aggggtgcca accgcgagg gggagccaat ctcaaaaagc 1260
244 acgtcgtagt ccggtcgga gtctgcaact cgactccgtg aagtcggaat cgctagtaat 1320
246 cgcggatcag catgccgcg tgaatacgtt cccgggtctt gtacacaccg cccgtcacac 1380
248 catgggagtg gttttcacca gaagcaggta gtttaaccgt aaggaggacg cttgccacgg 1440
250 tgggggtcat gactgggggtg                                     1460
253 <210> SEQ ID NO: 5
254 <211> LENGTH: 18
255 <212> TYPE: DNA
256 <213> ORGANISM: Oligonucleotide Probe (SEQ ID NO:5)
258 <400> SEQUENCE: 5
259 cccccctctt ctggatac

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18

## RAW SEQUENCE LISTING

DATE: 09/22/2003

PATENT APPLICATION: US/10/659,980

TIME: 14:16:53

Input Set : A:\81289-284781.ST25.txt

Output Set: N:\CRF4\09222003\J659980.raw

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262 <210> SEQ ID NO: 6
263 <211> LENGTH: 18
264 <212> TYPE: DNA
265 <213> ORGANISM: PCR primer (SEQ ID NO:6)
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268 cggaacgtat ccagaaga 18
271 <210> SEQ ID NO: 7
272 <211> LENGTH: 18
273 <212> TYPE: DNA
274 <213> ORGANISM: PCR primer (SEQ ID NO:7)
276 <400> SEQUENCE: 7
277 atctctagaa aattcgct 18
280 <210> SEQ ID NO: 8
281 <211> LENGTH: 19
282 <212> TYPE: DNA
283 <213> ORGANISM: Oligonucleotide probe (SEQ ID NO:8)
285 <400> SEQUENCE: 8
286 tccccactc gaagatacg 19
289 <210> SEQ ID NO: 9
290 <211> LENGTH: 17
291 <212> TYPE: DNA
292 <213> ORGANISM: PCR primer (SEQ ID NO:9) Same error
294 <400> SEQUENCE: 9
295 atcggaacgt atcttcg 17
298 <210> SEQ ID NO: 10
299 <211> LENGTH: 16
300 <212> TYPE: DNA
301 <213> ORGANISM: PCR primer (SEQ ID NO:10)
303 <400> SEQUENCE: 10
304 ccacctctcr gcgggc 16
307 <210> SEQ ID NO: 11
308 <211> LENGTH: 19
309 <212> TYPE: DNA
310 <213> ORGANISM: PCR primer (SEQ ID NO:11)
312 <400> SEQUENCE: 11
313 tcagaaagaa agaatcatg 19
316 <210> SEQ ID NO: 12
317 <211> LENGTH: 19
318 <212> TYPE: DNA
319 <213> ORGANISM: PCR primer (SEQ ID NO:12)
321 <400> SEQUENCE: 12
322 gtctccayta gattccaag 19
325 <210> SEQ ID NO: 13
326 <211> LENGTH: 17
327 <212> TYPE: DNA
328 <213> ORGANISM: PCR primer (SEQ ID NO:13)
330 <400> SEQUENCE: 13
331 gtttgatcct ggctcag 17
334 <210> SEQ ID NO: 14

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## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/659,980

DATE: 09/22/2003

TIME: 14:16:53

Input Set : A:\81289-284781.ST25.txt

Output Set: N:\CRF4\09222003\J659980.raw

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336 <212> TYPE: DNA
337 <213> ORGANISM: PCR primer (SEQ ID NO:14)
339 <400> SEQUENCE: 14
340 ggttaccttg ttacgactt 19
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344 <211> LENGTH: 17
345 <212> TYPE: DNA
346 <213> ORGANISM: PCR primer (SEQ ID NO:15)
348 <400> SEQUENCE: 15
349 cctacgggag gcagcag 17
352 <210> SEQ ID NO: 16
353 <211> LENGTH: 18
354 <212> TYPE: DNA
355 <213> ORGANISM: PCR primer (SEQ ID NO:16)
357 <400> SEQUENCE: 16
358 gwattaccgc ggckgctg 18
361 <210> SEQ ID NO: 17
362 <211> LENGTH: 20
363 <212> TYPE: DNA
364 <213> ORGANISM: PCR primer (SEQ ID NO:17)
366 <400> SEQUENCE: 17
367 cactctagcy ttgtagtctc 20
370 <210> SEQ ID NO: 18
371 <211> LENGTH: 1467
372 <212> TYPE: DNA
373 <213> ORGANISM: N. Aestuarii-like AOB P4clone42 16S rDNA (SEQ ID NO:18)
375 <400> SEQUENCE: 18
376 ttgatcatgg ctacgattga acgctggcgg catgctttac acatgcaagt cgaacggcag 60
378 cacgggtgct tgcacctggg ggcgagtggc ggacgggtga gtaatgcac ggaacgtgtc 120
380 cagaagtggg ggataacgca tcgaaagatg tgctaatacc gcatattctc tacggaggaa 180
382 agcaggggat cgaagacct tgtgcttttg gagcgccga tgcctgatta gctagtgtgt 240
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386 tgggactgag acacggccca gactcctacg ggaggcagca gtggggaatt ttggacaatg 360
388 ggcgaaagcc tgatccagca atgccgcgtg agtgaagaag gcttcgggtt gtaaagctct 420
390 ttcagtcgag aagaaaagg tgtgactaat aatcacaact tatgatgga cgcacagaag 480
392 aagcaccggc taactacgtg ccagcagccg cggtaatagc tagggtgcaa gcgttaatcg 540
394 gaattactgg gcgtaaaggg tgcgcaggcg gctttgtaag tcagatgtga aatccccggg 600
396 cttaacctgg gaattgcgtt tgaaactaca aagctagagt gtagcagagg ggggtggaat 660
398 tccatgtgta gcagtgaat gcgtagagat atggaagaac atcgatggcg aaggcagccc 720
400 cctgggttaa cactgacgct catgcacgaa agcgtgggga gcaaacagga ttagataccc 780
402 tggtagtcca cgccctaaac gatgtcaact agttgttggg ccttactagg cttggtaacg 840
404 tagctaacgc gtgaagtga ccgcctgggg agtacggctg caggattaaa actcaaagga 900
406 attgacgggg accgcacaa gcggtggatt atgtggatta attcgatgca acgcgaaaaa 960
408 ccttacctac ccttgacatg tagcgaatat tttagagata aaatagtgcc ttcgggaacg 1020
410 ctaacacagg tgctgcatgg ctgtcgtcag ctcgtgtcgt gagatgttgg gttaaagtccc 1080
412 gcaacgagcg caacccttgt cattaattgc catcatttag ttgggcactt taatgagact 1140
414 gccggtgaca aaccggagga aggtggggat gacgtcaagt cctcatggcc cttatgggta 1200
416 gggcttcaca cgtaatacaa tggcgcgtac agagggttgc caaccgcga gggggagcta 1260

```

**VERIFICATION SUMMARY**

DATE: 09/22/2003

PATENT APPLICATION: US/10/659,980

TIME: 14:16:54

Input Set : A:\81289-284781.ST25.txt

Output Set: N:\CRF4\09222003\J659980.raw

L:9 M:270 C: Current Application Number differs, Replaced Current Application No  
L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date